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Environmental Program



Barrier Verification and Monitoring for the International Partnership for the Evaluation of High-Pressure Jetting SERDP National Test Site, Dover, DE

- Objectives:** Provide verification and monitoring techniques to evaluate the emplacement and performance of high-pressure thin-diaphragm jet grouting as a method of barrier construction.
- Location:** Groundwater Remediation Field Laboratory, National Test Site Location, DoD National Environmental Technology Demonstration Program, Dover AFB, Delaware
- Summary:** Overall project is intended to evaluate the efficacy of using high-pressure thin-diaphragm jet grouting as a method of barrier emplacement. The monitoring aspect is intended to provide an evaluation of the barrier's performance over time. Several phases of the overall project are planned including emplacement and monitoring individual panels and small test enclosures/containments, full-scale emplacement and monitoring of large enclosure/containment, and testing Dense Non-aqueous Phase Liquids (DNAPL) treatment technologies within the enclosure(s). The FY97 activities are primarily focused on the first phase individual panels and small test boxes. Monitoring methods envisioned for use include a suite of conventional and innovative hydraulic, pneumatic, geophysical, and tracer techniques.
- Status:** Several programmatic and technical scoping meetings have been conducted. Final agreements between participants are being established. Preliminary scoping and a draft workplan of the emplacement, verification, and monitoring tasks have been completed. Initial team meetings and site tours were conducted. Drilling and sampling for site-specific/project-specific characterization at Dover site were completed in January 1997. Detailed verification and monitoring designs are being developed.
- Participants:** Department of Defense (DoD) - Strategic Environmental Research and Development Program (SERDP), U.S. Air Force
Department of Energy (DOE) - Office of Science and Technology (EM-50)
DuPont
Bruno Gemmi, Italy
Florida State University
Environmental Protection Agency
Sandia National Laboratories
Western Environmental Technology Office (WETO)
Lawrence Berkley National Laboratory
Hayward Baker
Applied Research Associates
- Agreements:** Memoranda of Agreement established between participants

Users: DOE - numerous sites requiring barrier emplacement
DoD - numerous contaminated sites
SERDP - National Test Site Location
Industry - various contamination applications

Leveraging: DuPont
SERDP National Test Site Location access and support

Monitoring
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